

REMARKS

Claims 1, 2, 4-7 and 9-24 are pending. Claims 1, 6, 9 and 21-24 are amended herein. Claim 9 has been amended to correct a clerical error. Support for the remaining amendments is at least found in the Abstract, and paragraphs [0026], [0027] and as detailed below.

Applicants' undersigned representative thanks Examiner HO for the courtesies extended during the telephone interview of July 27, 2009. Applicants' separate record of the substance thereof is incorporated in the remarks below.

Applicants' Response to the Claim Rejections under 35 U.S.C. §102(b)

Claims 1, 2, 4-7, 9, 10 and 21-24 are rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over *Kelley et al.* (US 6,433,359).

Applicants respectfully submit that the present invention as now claimed is not anticipated or obvious in light of Kelly for at least the reason that Kelly does not teach all the features of the present invention, nor is there any reason a skilled artisan would derive the present invention based on Kelly's disclosures.

Specifically, as noted during the interview Kelly does not provide for the organic thin film being two dimensional, nor for a buffer layer which consists essentially of pentacene or pentacene fluoride.

The rejections to date have not considered the two dimensional growth aspect of the claims on the basis the language used is functional and does not further limit the device claim language. Applicants have herein clarified that the organic thin film is a two dimensional film.

Further, the rejection maintains that the term "pentacene" as used in the claims is broad enough to encompass the "many different derivatives of pentacene." However, as noted during the telephone call, the parent claims as now pending utilize the transitional phrase "consisting essentially of" which under U.S. patent law, as restated in the M.P.E.P. §2111.03 limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original).

As detailed in the remarks section in the January 2009 Amendment, the functional groups, required by Kelly to be present for bonding, would clearly affect the basic and novel characteristics of applicants' invention. As such, the pentacene derivatives of Kelly should be considered excluded by the use of this transitional phrase. Wherefore, applicants respectfully request favourable reconsideration.

Applicants' Response to the Claim Rejections under 35 U.S.C. §103(a)

Claims 1, 2, 4-7, 9, 10 and 21-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Kelley et al.* (US 6,433,359) in view of *Afzali-Arkdakani et al.*(US 2004/0183070).

Similar to above, applicants respectfully submit that the present invention is not obvious even in further consideration of Afzali-Arkdakani for at least the reason that the references do not provide for all the features of the claims, nor is there any reason a skilled artisan would derive the present invention based on the combination.

Specifically, as noted during the interview, the combination does not provide for the two dimensional organic thin film or a buffer layer consisting essentially of pentacene or pentacene fluoride.

The current rejection maintains that applicants' previously filed arguments only treat the references independently; and second, the rejection asserts that obviousness does not require that the features of one reference must be bodily incorporatable into another reference.

In regard to the first statement, applicants respectfully submit that the primary position set forth in the remarks is that there is no basis whereby a skilled artisan would replace the in depth precursor self-assembled monolayer of Kelly with the pentacene precursor of Afzali-Ardakani. See page 10 of the February 24, 2009 Amendment. Wherefore, applicants respectfully submit that the combination is being addressed not only the teachings of one reference.

In regard to the rejections second statement that obviousness does not require that the layer of Afzali-Ardakani be bodily incorporatable into the monolayer of Kelly, applicants respectfully note that this is not the argument which is made. The principle of law that the rejection is referring to regards the physical structures being combinable (i.e. the features of references have the same dimensions, parameters, etc.). See M.P.E.P. §2145.III. Applicants respectfully submit that this is not the intended argument asserted in the remarks of the February

24, 2009 Amendment. The argument is that Kelly has specific functional group requirements. If the layer from Afzali-Ardakani replaces the layer of Kelly in a combination the functional groups are de facto removed from the layer. Thus the argument is not about physical structure not being combinable, but that Kelly would no longer function as intended because the functional groups would be removed in the modified embodiment. Thus the argument relates to the claimed combination changing the principle of operation of the primary reference or rendering the reference inoperable for its intended purpose. Under U.S. patent law, a combination which results in such a detriment to the function of the primary reference cannot be considered an obvious combination. See MPEP § 2143.01. Wherefore, in light of the above, applicants respectfully request favorable reconsideration.

Claims 21-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Dimitrakopoulos et al.* (US 2004/0161873) in view of *Hirai* (US 2003/0160235).

Similar to above, applicants respectfully submit that the present invention is not obvious in light of the combined references for at least the reason that the references do not provide for all the features of the claims, nor is there any reason a skilled artisan would derive the present invention based on the combination.

Specifically, as noted during the interview, the combination does not provide for the two dimensional organic thin film or a buffer layer consisting essentially of pentacene or pentacene fluoride.

Similar to above the rejection maintains that “consisting essentially of petanacene” does not exclude the pentacene derivatives disclosed in Dimitrakopoulus and that the arguments only address the combination of the bodily structure of Dimitrakopoulos to Hirai.

However, applicants respectfully note that the pentacene derivative of Dimitrakopoulus requires the use of functional groups (Z) similar to Kelly above. See paragraph [0056]. The presence of these groups within the pentacene derivative clearly materially affects the characteristics of the layer, especially a self assembling monolayer such as that of Dimitrakopoulus. As such, the present invention should be considered to exclude these functional groups from the claimed pentacene.

Wherefore, in light of the above, applicants respectfully request favorable reconsideration.

In view of the telephone interview of July 27, 2009, the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants’ undersigned attorney to arrange for an interview to expedite the disposition of this case.

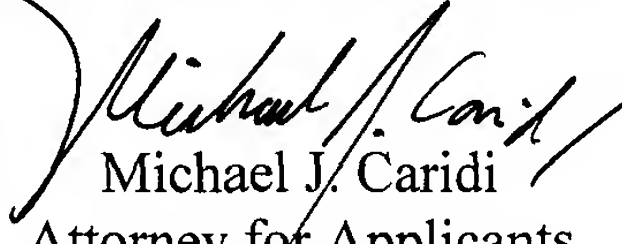
Application No. 10/594,152
Art Unit: 2815

Amendment under 37 C.F.R. §1.116
Attorney Docket No. 063111

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Michael J. Caridi
Attorney for Applicants
Registration No. 56,171
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

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